

### In the Claims

Claims 1-28 Canceled.

Claim 29 (Currently Amended) A recombinant nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to ~~a sequence complementary to that set forth in Figure 5A~~ (SEQ ID NO:10).

Claim 30 (Currently Amended) The recombinant nucleic acid of claim 29 comprising ~~a nucleic acid sequence as set forth in Figure 5A~~ (SEQ ID NO:10).

Claim 31 (Currently Amended) A recombinant nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% ~~75%~~ sequence identity to ~~a sequence as set forth in Figure 5A~~ (SEQ ID NO:10).

Claim 32 (Currently Amended) A recombinant nucleic acid encoding ~~an amino acid sequence as shown in Figure 4~~ (SEQ ID NO:9).

Claim 33 (Original) A host cell comprising the recombinant nucleic acid of claim 29.

Claim 34 (Original) An expression vector comprising the recombinant nucleic acid of claim 29 operably linked to a transcriptional regulatory sequence.

Claim 35 (Currently Amended) A host cell comprising an expression vector comprising the recombinant nucleic acid of claim 29 operably linked to a transcriptional regulatory sequence active in said host cell.

Claim 36 (Currently Amended) A transgenic plant comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27.

Claim 37 (Currently Amended) A transgenic plant comprising a host cell comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27, operably linked to a transcriptional regulatory sequence active in said cell.

Claim 38 (Currently Amended) A transgenic plant comprising a host cell comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 39 (Original) The transgenic plant of claim 38 wherein said host cell is a seed cell.

Claim 40 (Currently Amended) A transgenic seed comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an

NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27 operably linked to transcriptional regulatory sequences active in said seed.

Claim 41 (Original) A method of expressing an NTR protein comprising culturing a host cell comprising the recombinant nucleic acid of claim 29 under conditions suitable for expression of said NTR protein.

Claim 42 (Original) A method of expressing an NTR protein comprising culturing a host cell comprising an expression vector comprising the recombinant nucleic acid of claim 29 operably linked to regulatory sequences active in said host cell under conditions suitable for expression of said NTR protein.

Claim 43 (Currently Amended) A method of expressing an NTR protein comprising culturing a transgenic plant comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27 under conditions suitable for expression of said NTR protein.

Claim 44 (Currently Amended) A method of expressing an NTR protein comprising culturing a transgenic plant comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 29, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under

high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27 operably linked to regulatory sequences active in said transgenic plant under conditions suitable for expression of said NTR protein.

Claim 45 (Original) A method of expressing an NTR protein comprising culturing the transgenic seed of claim 40.

Claim 46 (Previously Presented) The method of claim 41 further comprising recovering said protein.

Claim 47-49 (Withdrawn)

Claims 50-64 (Canceled).

Claim 65 (Currently Amended) A isolated nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to ~~a sequence complementary to that set forth in Figure 5A (SEQ ID NO:10).~~

Claim 66 (Currently Amended) The isolated nucleic acid of claim 65 comprising ~~a nucleic acid sequence as set forth in Figure 5A (SEQ ID NO:10).~~

Claim 67 (Currently Amended) An isolated nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% ~~75%~~ sequence identity to ~~a sequence as set forth in Figure 5A (SEQ ID NO:10).~~

Claim 68 (Currently Amended) An isolated nucleic acid encoding ~~an amino acid sequence as shown in Figure 4~~ (SEQ ID NO:9).

Claim 69 (Currently Amended) A transgenic plant comprising the isolated nucleic acid selected from the group consisting of the nucleic acid of claim 65, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27.

Claim 70 (Currently Amended) A transgenic seed comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 65, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid that hybridizes under high stringency conditions to SEQ ID NO:27, operably linked to transcriptional regulatory sequences active in said seed.

Claims 71-72 Canceled.

Claim 73 (Previously Presented) An expression vector comprising the recombinant nucleic of claim 30 operably linked to a transcriptional regulatory sequence.

Claim 74 (Previously Presented) An expression vector comprising the recombinant nucleic of claim 31 operably linked to a transcriptional regulatory sequence.

Claim 75 (Previously Presented) An expression vector comprising the recombinant nucleic of claim 32 operably linked to a transcriptional regulatory sequence.

Claim 76 (Currently Amended) A host cell comprising an expression vector comprising the recombinant nucleic acid of claim 30 operably linked to a transcriptional regulatory sequence active in said host cell.

Claim 77 (Currently Amended) A host cell comprising an expression vector comprising the recombinant nucleic acid of claim 31 operably linked to a transcriptional regulatory sequence active in said host cell.

Claim 78 (Currently Amended) A host cell comprising an expression vector comprising the recombinant nucleic acid of claim 32 operably linked to a transcriptional regulatory sequence active in said host cell.

Claim 79 (Currently Amended) A transgenic plant comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 30, SEQ ID NO:26, and SEQ ID NO:27.

Claim 80 (Currently Amended) A transgenic plant comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 31, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:27.

Claim 81 (Currently Amended) A transgenic plant comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 32, a nucleic acid encoding SEQ ID NO:24, and a nucleic acid encoding SEQ ID NO:25.

Claim 82 (Currently Amended) A transgenic plant comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 30, SEQ ID NO:26, and SEQ ID NO:27 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 83 (Currently Amended) A transgenic plant comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 31, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:27 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 84 (Currently Amended) A transgenic plant comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 32, a nucleic acid encoding SEQ ID NO:24, and a nucleic acid encoding SEQ ID NO:25 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 85 (Currently Amended) A transgenic plant comprising a host cell comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 30, SEQ ID NO:26, and SEQ ID NO:27 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 86 (Currently Amended) A transgenic plant comprising a host cell comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 31, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:27 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 87 (Currently Amended) A transgenic plant comprising a host cell comprising an expression vector comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 32, a nucleic acid encoding SEQ ID NO:24, and a nucleic acid encoding SEQ ID NO:25 operably linked to a transcriptional regulatory sequence active in said cell.

Claim 88 (Currently Amended) A transgenic seed comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 30, SEQ ID NO:26, and SEQ ID NO:27 operably linked to transcriptional regulatory sequences active in said seed.

Claim 89 (Currently Amended) A transgenic seed comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 31, a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:26, and a nucleic acid encoding an NTR protein having NTR biological activity comprising a nucleic acid having at least 95% sequence identity to SEQ ID NO:27 operably linked to transcriptional regulatory sequences active in said seed.

Claim 90 (Currently Amended) A transgenic seed comprising the recombinant nucleic acid selected from the group consisting of the nucleic acid of claim 32, a nucleic acid encoding SEQ



ID NO:24, and a nucleic acid encoding SEQ ID NO:25 operably linked to transcriptional regulatory sequences active in said seed.

Claim 91 (Previously Presented) The method of claim 42 further comprising recovering said protein.

Claim 92 (Previously Presented) The method of claim 43 further comprising recovering said protein.

Claim 93 (Previously Presented) The method of claim 44 further comprising recovering said protein.

Claim 94 (Previously Presented) The method of claim 45 further comprising recovering said protein.